

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003268**Date Inspected:** 12-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yanhua**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

**Bay 3 – Heavy Duty Machinery Shop**

The QA Inspector observed ZPMC personnel in the process of excavating five repair areas on deck panel DP052-001 which ZPMC had performed Ultrasonic testing (UT) and found indications which require lack of penetration repair (LOP).

The reject repair reports for UT (LOP) were listed by ZPMC as BWR488, BWR499, BWR500, BWR501, and BWR502.

The QA Inspector informed the Swing Shift QA Lead Inspector Albert Carreon by phone, and he informed the SMR Ady Velasco.

Mr. Valesco reply to Mr. Carreon was that the repair procedure submitted by ZPMC was still not approved by Caltrans but to inform ZPMC personnel that if they continued with the repairs it would be at their own risk.

The QA Inspector informed the Certified Welding Inspector (CWI) Mr. Li Yin Hua, and ZPMC decided to continue with the repairs.

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## WELDING INSPECTION REPORT

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The weld repair appeared to comply with the weld procedure specification (WPS) WPS-345 FCAW-2G (2F)-repair 1 which was submitted by ZPMC as LOP repair procedure.

The Submittal number 634R2 Internal Weld Repair Demonstration dated June 11, 2008.

### Tower Bay # 1

The QA Inspector randomly observed ZPMC performing flame heat straightening using heat straightening report number HSR1 (T)-270 6. The weld numbers on the report were identified as 20A, 20B, 13B, 112A, 112B, 88A, 88B, 7A, and 7B. The weld map being used was identified as SSD1-SA173 A/K, and the weld joints were identified as SSD1-SA16 F/G SSD1-SA173 J/K.

### Tower Bay # 2

The QA Inspector observed ZPMC qualified and approved welders Hu Ji Lian # 040614 and Zhang Bing Hua # 053316 performing Flux Cored Arc Welding (FCAW) to weld filler passes for the Complete Joint Penetration (CJP) butt weld of the longitudinal stiffener skin (E) weld joint ESD1-SA216 G/K-8A/B 8A.

The ZPMC Certified Welding Inspector (CWI) Jiang Jian Fei and various assistant welding Inspectors were monitoring the welding parameters.

The QA Inspector verified the welding machine amperage, voltage and filler metal per the Welding Procedure Specifications (WPS) which was posted at the welding station. The CWI identified the WPS being used to perform the welding as WPS-B-T-2231-B-U3-F.

### Summary of Conversations:

As noted within the report shown above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dixon,Roscoe	Quality Assurance Inspector
<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer

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